REMARKS

In response to the Official Action mailed November 6, 2002, Applicants request reconsideration. In this Amendment, no claims are added or canceled and claims 1, 2, and 5-8 remain pending. Claim 9 is not being examined pursuant to a restriction requirement and election.

Claims 1, 2, and 5-8 were rejected as unpatentable over Von Stein (U.S. Pat. No. 5,886,595) considered by itself. Applicants respectfully traverse the rejection.

In the Official Action mailed March 29, 2002, the Examiner asserted that it was well known that a short or open was required for reflection, and that it would have been obvious to adjust the length and width of the transmission lines to achieve the desired load condition. In the Amendment filed August 27, 2002, Applicants presented an argument rebutting that assertion. In the Official Action mailed November 6, 2002, the Examiner reapplied said assertion in precisely the same way, without responding to Applicants' arguments. In this response, the arguments set forth in the Amendment filed August 27, 2002, are reiterated. In order to advance prosecution, Applicants respectfully request reconsideration of the arguments, and an appropriate response if the arguments are not accepted.

In rejecting claims 1 and 5, the Examiner misstated a basic tenet of transmission line technology. According to the Examiner, it "is well known [that] a short or open is required for reflections." This statement is incorrect. Any impedance mismatch in transmission lines is very well known to produce reflections. Further, the Examiner stated that it would have been obvious to have adjusted the length and width of transmission lines to specific dimensions to achieve desired load conditions. This statement is correct. Moreover, the statement does not furnish a basis for modifying Von Stein in any way that could produce the claimed invention. How is it known what load conditions are desired? Only knowledge of the invention could provide that information. That knowledge cannot be relied upon to reject the claims. In addition, even if the desired load condition is known, there are multiple ways of achieving that condition. How does one select among those ways to suggest the invention? The conclusion is that general principles of technology do not point in the direction of any particular structure, and certainly not the structure of claims 1 and 5.

Regarding claims 1, 7, and 8, the Official Action asserted that a third harmonic reflecting circuit, a second harmonic processing circuit, and a fundamental wave matching circuit, are inherent in Von Stein. However, the Official Action provides no rationale or evidence supporting a rejection based on inherency. Where are the third harmonic reflecting circuit or the second harmonic processing circuit described in Von Stein? Furthermore, where is the combination of these circuits suggested in Von Stein? In order to demonstrate that these limitations are inherent in Von Stein, the Examiner must establish that those

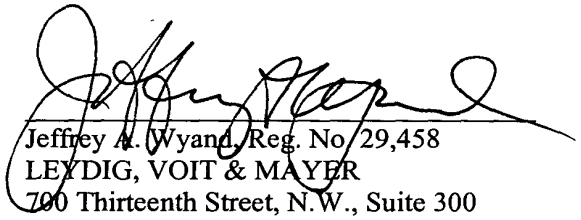
limitations **necessarily** occur in Von Stein. Clearly, they do not. This rejection must be withdrawn as to claims 1, 2, 7, and 8.

Von Stein is directed to an odd order frequency multiplier that outputs a desired odd harmonic. (see Abstract of Von Stein). The multiplier includes an input matching network between the multiplier input and the gate of a MESFET transistor, the matching network comprising an open stub providing an RF short for leakage at a selected and unspecified odd harmonic of the output frequency (see column 3, lines 7-29; claim 3; and claim 11 of Von Stein). An open stub providing a short at a selected odd harmonic does not suggest a reflection of even harmonics, as the Official Action suggests. Notably, Von Stein discloses that it is an *output* impedance matching network, connected to the drain of a MESFET transistor, that reflects undesired even harmonics back to the MESFET to produce increased energy at the selected odd harmonic (see column 4, lines 3-18 and claim 16 of Von Stein). This description suggests that it is not desirable in Von Stein to reflect even harmonics on the input side, contrary to the invention. Von Stein clearly fails to suggest an input-side impedance matching circuit that provides an impedance of a substantially open circuit load with respect to even number higher harmonics of a fundamental wave. Accordingly, the rejection of claims 1 and 2 should be withdrawn.

Applicants note that claims 2 and 6 have been rejected as optimizations. Applicants respectfully disagree. However, since those claims depend from claims that are patentable over the only reference applied in rejecting the claims, for the reasons already supplied, the rejections of claims 2 and 6 do not need further comment.

Reconsideration and withdrawal of the rejection, as well as allowance of the pending and examined claims, are appropriate and earnestly solicited.

Respectfully submitted,



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